

Francesco Califano

List of Publications by Year in descending order

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82
papers

2,547
citations

172457

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docs citations

89
times ranked

1500
citing authors

#	ARTICLE	IF	CITATIONS
1	Kelvin-Helmholtz instability and induced magnetic reconnection at the Earth's magnetopause: a 3D simulation based on satellite data. <i>Plasma Physics and Controlled Fusion</i> , 2022, 64, 044014.	2.1	1
2	Atmospheric propellant fed Hall thruster discharges: 0D-hybrid model and experimental results. <i>Plasma Sources Science and Technology</i> , 2022, 31, 075003.	3.1	3
3	Energy Conversions Associated With Magnetic Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, .	2.4	10
4	Detecting Reconnection Events in Kinetic Vlasov Hybrid Simulations Using Clustering Techniques. <i>Astrophysical Journal</i> , 2021, 908, 107.	4.5	8
5	Two-Dimensional Velocity of the Magnetic Structure Observed on July 11, 2017 by the Magnetospheric Multiscale Spacecraft. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028705.	2.4	7
6	Bridging hybrid- and full-kinetic models with Landau-fluid electrons. <i>Astronomy and Astrophysics</i> , 2021, 653, A156.	5.1	6
7	Characterizing current structures in 3D hybrid-kinetic simulations of plasma turbulence. <i>Astronomy and Astrophysics</i> , 2021, 655, A107.	5.1	6
8	Investigating Mercury's Environment with the Two-Spacecraft BepiColombo Mission. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	71
9	Electron-Only Reconnection in Plasma Turbulence. <i>Frontiers in Physics</i> , 2020, 8, .	2.1	27
10	A multi-fluid model of the magnetopause. <i>Annales Geophysicae</i> , 2020, 38, 275-286.	1.6	2
11	Latitudinal Dependence of the Kelvin-Helmholtz Instability and Beta Dependence of Vortex-Induced High-Guide Field Magnetic Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027333.	2.4	7
12	Simulation of Plasmaspheric Plume Impact on Dayside Magnetic Reconnection. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086546.	4.0	19
13	Identifying Magnetic Reconnection in 2D Hybrid Vlasov Maxwell Simulations with Convolutional Neural Networks. <i>Astrophysical Journal</i> , 2020, 900, 86.	4.5	9
14	Statistical properties of turbulent fluctuations associated with electron-only magnetic reconnection. <i>Astronomy and Astrophysics</i> , 2020, 642, A45.	5.1	8
15	ViDA: a Vlasov-Darwin solver for plasma physics at electron scales. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	13
16	Satellite Data-Based 3D Simulation of Kelvin-Helmholtz Instability and Induced Magnetic Reconnection at the Earth's Magnetopause. <i>Geophysical Research Letters</i> , 2019, 46, 11597-11605.	4.0	15
17	Four-Spacecraft Measurements of the Shape and Dimensionality of Magnetic Structures in the Near-Earth Plasma Environment. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 6850-6868.	2.4	7
18	Counterstreaming beams in magnetised Vlasov plasma. <i>Pramana - Journal of Physics</i> , 2019, 93, 1.	1.8	3

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19	Signatures of Cold Ions in a Kinetic Simulation of the Reconnecting Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 2497.	2.4	14
20	In situ spacecraft observations of a structured electron diffusion region during magnetopause reconnection. <i>Physical Review E</i> , 2019, 99, 043204.	2.1	11
21	Crossing of Plasma Structures by Spacecraft: A Path Calculator. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10119-10140.	2.4	4
22	Interplay between Kelvin-Helmholtz and lower-hybrid drift instabilities. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	6
23	Coherent Structures and Spectral Energy Transfer in Turbulent Plasma: A Space-Filter Approach. <i>Physical Review Letters</i> , 2018, 120, 125101.	7.8	41
24	North-South Asymmetric Kelvin-Helmholtz Instability and Induced Reconnection at the Earth's Magnetospheric Flanks. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9340-9356.	2.4	19
25	Dual Phase-space Cascades in 3D Hybrid-Vlasov-Maxwell Turbulence. <i>Astrophysical Journal Letters</i> , 2018, 856, L13.	8.3	58
26	Reconnection and small-scale fields in 2D-3V hybrid-kinetic driven turbulence simulations. <i>New Journal of Physics</i> , 2017, 19, 025007.	2.9	82
27	Plasma turbulence at ion scales: a comparison between particle in cell and Eulerian hybrid-kinetic approaches. <i>Journal of Plasma Physics</i> , 2017, 83, .	2.1	34
28	Kinetic Cascade in Solar-wind Turbulence: 3D3V Hybrid-kinetic Simulations with Electron Inertia. <i>Astrophysical Journal Letters</i> , 2017, 846, L18.	8.3	66
29	Fully Kinetic versus Reduced-kinetic Modeling of Collisionless Plasma Turbulence. <i>Astrophysical Journal</i> , 2017, 847, 28.	4.5	60
30	Magnetic Reconnection as a Driver for a Sub-ion-scale Cascade in Plasma Turbulence. <i>Astrophysical Journal Letters</i> , 2017, 850, L16.	8.3	92
31	Magnetized Kelvin-Helmholtz instability: theory and simulations in the Earth's magnetosphere context. <i>Journal of Plasma Physics</i> , 2017, 83, .	2.1	49
32	Turbulent dynamo in a collisionless plasma. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 3950-3953.	7.1	43
33	Pressure anisotropy and small spatial scales induced by velocity shear. <i>Physical Review E</i> , 2016, 93, 053203.	2.1	58
34	SUBPROTON-SCALE CASCADES IN SOLAR WIND TURBULENCE: DRIVEN HYBRID-KINETIC SIMULATIONS. <i>Astrophysical Journal Letters</i> , 2016, 822, L12.	8.3	61
35	Pressure anisotropy generation in a magnetized plasma configuration with a shear flow velocity. <i>Plasma Physics and Controlled Fusion</i> , 2016, 58, 045007.	2.1	11
36	Two-fluid numerical simulations of turbulence inside Kelvin-Helmholtz vortices: Intermittency and reconnecting current sheets. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	18

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37	A kinetic model of plasma turbulence. <i>Journal of Plasma Physics</i> , 2015, 81, .	2.1	136
38	Theory and applications of the Vlasov equation. <i>European Physical Journal D</i> , 2015, 69, 1.	1.3	17
39	Double-reconnected magnetic structures driven by Kelvin-Helmholtz vortices at the Earth's magnetosphere. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	23
40	Kelvin-Helmholtz vortices and double mid-latitude reconnection at the Earth's magnetopause: Comparison between observations and simulations. <i>Europhysics Letters</i> , 2014, 107, 19001.	2.0	21
41	Pressure tensor in the presence of velocity shear: Stationary solutions and self-consistent equilibria. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	21
42	PROTON KINETIC EFFECTS IN VLASOV AND SOLAR WIND TURBULENCE. <i>Astrophysical Journal Letters</i> , 2014, 781, L27.	8.3	80
43	Hybrid Vlasov-Maxwell simulations of two-dimensional turbulence in plasmas. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	55
44	Cluster observations of whistler waves correlated with ion-scale magnetic structures during the 17 August 2003 substorm event. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 6072-6089.	2.4	20
45	Extended fluid models: Pressure tensor effects and equilibria. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	29
46	Nonlinear evolution of the magnetized Kelvin-Helmholtz instability: From fluid to kinetic modeling. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	48
47	Coupling between whistler waves and slow-mode solitary waves. <i>Physics of Plasmas</i> , 2012, 19, 052103.	1.9	7
48	On the breaking of a plasma wave in a thermal plasma. II. Electromagnetic wave interaction with the breaking plasma wave. <i>Physics of Plasmas</i> , 2012, 19, 113103.	1.9	17
49	On the breaking of a plasma wave in a thermal plasma. I. The structure of the density singularity. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	22
50	Double mid-latitude dynamical reconnection at the magnetopause: An efficient mechanism allowing solar wind to enter the Earth's magnetosphere. <i>Europhysics Letters</i> , 2012, 100, 69001.	2.0	27
51	Magnetic reconnection and Kelvin-Helmholtz instabilities at the Earth's magnetopause. <i>Plasma Physics and Controlled Fusion</i> , 2012, 54, 124037.	2.1	44
52	Magnetised Kelvin-Helmholtz instability in the intermediate regime between subsonic and supersonic regimes. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	16
53	Local Kinetic Effects in Two-Dimensional Plasma Turbulence. <i>Physical Review Letters</i> , 2012, 108, 045001.	7.8	159
54	Compressible Kelvin-Helmholtz instability in supermagnetosonic regimes. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	12

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55	Nonlinear vortex dynamics in an inhomogeneous magnetized plasma with a sheared velocity field. Plasma Physics and Controlled Fusion, 2011, 53, 015003.	2.1	16
56	On the transition between the Weibel and the whistler instabilities. Plasma Physics and Controlled Fusion, 2010, 52, 095007.	2.1	9
57	Two-Dimensional Kinetic Turbulence in the Solar Wind. Physical Review Letters, 2010, 104, 205002.	7.8	53
58	Collisionless magnetic reconnection in the presence of a sheared velocity field. Physics of Plasmas, 2010, 17, .	1.9	20
59	Solar wind interaction with the Earth's magnetosphere: the role of reconnection in the presence of a large scale sheared flow. Nonlinear Processes in Geophysics, 2009, 16, 1-10.	1.3	14
60	Nonlinear kinetic development of the Weibel instability and the generation of electrostatic coherent structures. Plasma Physics and Controlled Fusion, 2009, 51, 125006.	2.1	34
61	Being on time in magnetic reconnection. New Journal of Physics, 2009, 11, 063008.	2.9	31
62	A one dimensional, electrostatic Vlasov model for the generation of suprathermal electron tails in solar wind conditions. Journal of Geophysical Research, 2008, 113, .	3.3	4
63	Nonlinear mirror mode dynamics: Simulations and modeling. Journal of Geophysical Research, 2008, 113, .	3.3	57
64	Interplay between Magnetic Reconnection and the Kelvin-Helmholtz and Rayleigh-Taylor Instabilities in a Magnetized Inhomogeneous Plasma with a Velocity Shear. , 2008, , .		0
65	Time Window for Magnetic Reconnection in Plasma Configurations with Velocity Shear. Physical Review Letters, 2008, 101, 175003.	7.8	25
66	Competing Mechanisms of Plasma Transport in Inhomogeneous Configurations with Velocity Shear: The Solar-Wind Interaction with Earth's Magnetosphere. Physical Review Letters, 2008, 100, 015001.	7.8	54
67	Numerical Evidence of Undriven, Fast Reconnection in the Solar-Wind Interaction with Earth's Magnetosphere: Formation of Electromagnetic Coherent Structures. Physical Review Letters, 2008, 101, 105001.	7.8	35
68	Collisionless magnetic reconnection. Plasma Physics and Controlled Fusion, 2007, 49, B439-B446.	2.1	5
69	A hybrid-Vlasov model based on the current advance method for the simulation of collisionless magnetized plasma. Journal of Computational Physics, 2007, 225, 753-770.	3.8	167
70	MAGNETIC FIELD GENERATION IN ANISOTROPIC RELATIVISTIC PLASMA REGIMES. , 2007, , .		0
71	â€œEchographyâ€•of Vlasov codes. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 355, 381-385.	2.1	4
72	Three-Dimensional Magnetic Structures Generated by the Development of the Filamentation (Weibel) Instability in the Relativistic Regime. Physical Review Letters, 2006, 96, 105008.	7.8	50

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73	ELECTRON PARALLEL COMPRESSIBILITY IN THE NONLINEAR DEVELOPMENT OF TWO-DIMENSIONAL COLLISIONLESS MAGNETOHYDRODYNAMIC RECONNECTION. <i>Modern Physics Letters B</i> , 2006, 20, 931-961.	1.9	28
74	Aspects of three-dimensional magnetic reconnection. <i>Physics of Plasmas</i> , 2005, 12, 032309.	1.9	49
75	Generation of a Nonuniform Transverse Ion Flow by a Propagating Electrostatic Wave in a Strongly Magnetized Hot Plasma. <i>Transport Theory and Statistical Physics</i> , 2005, 34, 173-190.	0.4	2
76	Asymptotic Evolution of Weakly Collisional Vlasov-Poisson Plasmas. <i>Physical Review Letters</i> , 2005, 95, 015002.	7.8	25
77	Secondary Instabilities in Two-Dimensional Collisionless Magnetic Field Line Reconnection in a Fluid Plasma. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	0
78	Generation of suprathermal electron tails in the solar wind. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	0
79	Propagation of a short proton beam through a thin plasma slab. <i>Physical Review E</i> , 2003, 68, 066406.	2.1	5
80	A Numerical Scheme for the Integration of the Vlasov-Maxwell System of Equations. <i>Journal of Computational Physics</i> , 2002, 179, 495-538.	3.8	147
81	Perpendicular electron trapping associated with nonlinear whistlers. <i>Physics of Plasmas</i> , 2001, 8, 3217-3226.	1.9	7
82	Study of PVI-based diagnostics for 1D time-series in space plasma. <i>Astronomy and Astrophysics</i> , 0, , .	5.1	0